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No. XI.

HUGHES'S METHOD OF TEACHING THE BLIND TO READ AND WRITE.

Mr. Hughes, who has been blind for seven years, explained his new system of stenographic embossing, by which the blind may readily be taught to read and write with great facility.

The system consists of the formation of two dots, the one smooth and the other rough, which, with the aid of a guide-line, are so arranged that all the letters of the alphabet, as also the numerals, are readily represented, merely by impressing the paper either with the smooth end or rough end of the embossing instrument in squares regulated by what Mr. Hughes calls the formula, which consists of a brass frame, furnished with vertical and horizontal bars, placed at equal distances.

No. XII.

ON THE MEANS OF CLEANSING DAILY THE STREETS OF THE METROPOLIS.

By the Secretary.

Jan. 10, 1844.

DR. ROGET, SEC. R.S. V.P. IN THE CHAIR.

Abstract.

The attention of the author was first drawn to this subject in 1821, in which year he prepared a short account of the method he proposed of partially employing the poor in daily sweeping the streets, and of thus abolishing one of the greatest nuisances in the metropolis.

There are three ways by which this desirable object may be attained.

1. By machine-work only.
2. By manual labour only; and
3. By machine-work and manual labour conjointly.

The machine for cleansing streets, invented by Mr. Whitworth of Manchester (a model of which was placed before the meeting), consists of a cart formed of two distinct parts; the lower part, which contains the soil, is suspended from the cart-axle by chains, the weight of the loaded part is confined to the axle, having no tendency to decrease the action of the sweeping apparatus, to which motion is given by a cog-wheel attached to the offside wheel of the cart; the chains, to which brooms are attached, are carried round two corresponding wheels or sheaves, and as the cart moves forward, each brush in succession meets the ground, and sweeps a quantity of soil up an inclined trough into the lower portion of the cart, which when filled can be removed, and an empty receptacle substituted.

The whole extent of carriage-way included in the metropolitan districts proposed to be cleansed daily, embraces an area of 6,246,902 superficial yards, and as one machine is capable of sweeping 19,280 superficial yards in eight hours (from midnight till eight in the morning), it would require 324 machines to perform the whole work daily.

The cost of sweeping the streets by machine-work, and transporting the soil to the depôts or lay-stalls, would be, on an average, about 1*s*, 6*d*, per 1000 yards swept by the machine, so that the daily cost would amount to 468*l*., or 170,820*l.* per annum. The ashes from the 65,790 houses in the districts included, would realise about 100,000*l.* a-year, reducing the net cost therefore to 70,820*l.* a-year, or rather under 22*s.* per house.

If manual labour only were employed for cleansing the same extent of surface, it would require 3120 men to do the work daily, which at 2*s.* each per day, or 14*s.* per week, would make 113,880*l.*, or net 3880*l.* which is exclusive of transporting the soil to the laystalls or depôts.

The foot-pavement in the same districts extends over about 1,041,150 superficial yards, which at 1*s.* 3*d.* per thousand yards cleansed, would cost annually 23,743*l.*; and taking the whole of the carriage and footways, the cost per house would not, on an average, exceed 1*l.* 8*s.* 8*d.* per annum.

The most effectual and economical way, however, of effecting the object would be by machine-work and manual labour jointly; for it is found that when a street is once thoroughly cleansed by a machine, and afterwards kept continually swept by manual labour, the aid of such machine is only required occasionally, as after drizzling rain, or snow, &c.

March 6, 1844.

BENJAMIN ROTCH, ESQ. V.P. IN THE CHAIR.

THE results of an experiment made in parts of Regent Street and Oxford Street, conducted by a committee of the inhabitants, and assisted by the Practical and scientific Association for the promotion of improved street-paving, cleansing, &c. was laid before the society.